

LYNNYELLA, A NEW GENUS OF CLICK BEETLES FROM CENTRAL AND SOUTHERN CHILE (COLEOPTERA: ELATERIDAE).

LYNNYELLA, UN NUEVO GÉNERO DE ESCARABAJO DEL CENTRO-SUR DE CHILE (COLEOPERA: ELATERIDAE)

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ABSTRACT

The new genus *Lynnyella* is here described. The type species for the genus *Lynnyella* is *Deromecus suturalis* (Candèze 1865). The new genus *Lynnyella* belongs to the tribe Pomachiliini and includes: *L. suturalis* (Candèze 1865) n. comb., *L. concepcionensis* Arias n. sp., *L. diegoi* Arias n. sp., *L. gerhardtae* Arias n. sp., *L. juanjoseorum* Arias n. sp., *L. longaviensis* Arias n. sp., and *L. valenciai* Arias n. sp. The genus *Lynnyella* is distributed in Central and Southern Chile. The geographic distributions of these species are mapped and a key is provided.

KEYWORDS: *Deromecus suturalis*, *Lynnyella*, Pomachiliini, Elaterinae, Elateridae.

RESUMEN

Se describe *Lynnyella*, nuevo género de Elateridae para Chile, el cual tiene como especie tipo a *Deromecus suturalis* Candèze 1865. Este género pertenece a la tribu Pomachiliini, e incluye las siguientes especies: *L. suturalis* n. comb., *L. concepcionensis* Arias n. sp., *L. diegoi* Arias n. sp., *L. gerhardtae* Arias n. sp., *L. juanjoseorum* Arias n. sp., *L. longaviensis* Arias n. sp., y *L. valenciai* Arias n. sp. Las especies del género *Lynnyella* se encuentran distribuidas en la zona centro y sur de Chile. Se proporciona un mapa con la distribución geográfica para las especies mencionadas y una clave de éstas.

PALABRAS CLAVES: *Deromecus suturalis*, *Lynnyella*, Pomachiliini, Elaterinae, Elateridae

INTRODUCTION

E. O. Wilson (1992) explained that some of the unique areas of the world, so called "hot spots", are continuously threatened by development. Systematists must pay special attention to these areas that bear not only unique biota but also the means to understand links in evolutionary processes. Cen-

tral and Southern Chile is one of these hot spots, rich in endemic species because of its isolation from the rest of the continent. Unfortunately, most systematic work in the region has been on hold since the last century due to lack of funding, which tends to be directed towards applied science studies.

While studying elaterids (Arias 1999) I found that not only several species but also several genera had been lumped together by poorly defined terms on superficial morphology. Included were representatives of the genera *Podonema* Solier 1851, *Deromecus* Solier 1851, *Pomachilius* Eschscholtz 1829 and the new genus *Lynnyella* all identified as *Deromecus suturalis*. In his original description,

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the naturalist from Belgium Candèze (1865) described the species *Deromecus suturalis* in the group of *Pomachiliites* as follows: "*elongatus, niger, nitidus, griseopubescentis; fronte antice rufescente; antennis brunneis, articulo secundo tertio breviori; prothorace latitudine longiore, subcylindrico, medio postice deplanato, crebe punctato, lateribus testaceis, angulis posticis longis, valde divaricatis; elytris prothorace latioribus, parallelis, striis subtilibus punctatis, testaceis, sutura late brunnea. Corpore subtus brunneo, pedibus testateis, tarsorum articulo quarto precedenti paulo breviori. - Long 14, lat. 3 mill. Chili*".

The new genus *Lynnyella* does not share the generic characters of *Deromecus*, (Arias 1999, Arias 2001). The genus *Deromecus* and the new genus *Lynnyella* belong to the *Pomachiliini* clade (Arias 1999), and their phylogeny will be treated in a future publication. The genus *Deromecus* differs from *Lynnyella* in having a body stout and cylindrical, pronotum and elytra similar in width, mesosternal cavity subquadrate, with sides well elevated, and in wing venation MP3 joint MP4+CuA2 (Arias 2001). I describe the new genus *Lynnyella* with the following species: *L. suturalis* (Candèze) new combination, *L. conceptionensis* Arias new species, *L. diegoi* Arias new species, *L. gerhardtae* Arias new species, *L. juanjoseorum* Arias new species, *L. longaviensis* Arias new species, and *L. valenciai* Arias new species. The new genus *Lynnyella* is distributed between 32°-42° South and 71°-73° West in Central and Southern Chile.

MATERIALS AND METHODS

Specimens and primary types were borrowed from museums around the world to study morphological characters. Specimens compared with the type material were used to complete descriptions. When the type material was in poor condition dissections were conducted with compared material. Conditions of the type material are indicated under "Type material". Museums and institutions which contributed to this work are indicated in the acknowledgements and, in the text, by the acronyms in brackets (Arnett *et al.* 1997), excluding [ETA] author's collection. Type specimen repositories are also indicated in descriptions.

Measurements were made with a calibrated

ocular micrometer as follows: Total body length, total length of the body (mm). Length taken in a dorsal view. Eyes Index [EI] is obtained by subtracting the interocular head (frons) width from the maximum width of the head across the eyes and dividing the result by the maximum head width (Calder 1996). Pronotal index [PNI] is obtained by dividing the length of the pronotum, measured along the middle line, by the maximum width of the pronotum across the posterior angles (Calder 1996). Pronotal elytral index is obtained by dividing the length of the pronotum by the length of the elytra. Elytron humeral-area [EHA], on the anterior elytron as long as scutellum length. This character might be of importance at generic level. Elytron index [ELI] is obtained by dividing the length of the length of the elytron by its width.

Proportions are given to facilitate comparison among individuals or among species, and are indicated as follows: Antennomere proportion [AP] lists the lengths of antennomeres 2 through 11, (antennomere 1 is hard to measure due to its curved shape) as 1/100ths of the total antennal length. Length taken from a dorsal view. Tarsomere proportion [TP] lists the lengths of tarsomeres 1 through 5 as 1/100ths of the total tarsal length (Arias 1999).

Specimens from which genitalia and or the left hindwing were removed were first relaxed overnight in warm water with a few drops of soap. For examination of wing venation the hindwing of the specimen was removed, and then placed either in a transparent card under the specimen or on a microscope slide with a drop of water added to the surface. In both cases the hindwing was unfolded and spread out as much as possible, and then the water was allowed to evaporate until the wing adhered to the glass slide. In general the wings remained on the glass slide without the addition of an adhesive. For protection, a glass cover slip was placed over the wing and attached at its edges with transparent methacrylate. For examination of male genitalia, the last abdominal segment was removed and placed in water with a few drops of soap in a Petri dish and left over night. Genitalia were extracted and glued to a point card on its lateral side with transparent methacrylate, and placed on the pin under the specimen. Female genitalia were not examined due to absence of material for some of the species. Drawings were made using a camera

lucida on a dissecting scope Leica MZ7. All dates in the records given were converted to a standard format of day.month.year, with the month given in Roman numerals. Place names given from recorded labels are the original spellings.

DEFINITIONS

Antennal pocket: also referred to as antennal groove. Presence of a longitudinal groove in the apical portion of the Pronotosternal sutures, in some species spoon shaped. Antennomeres 1 through 3 are accommodated in this groove; sometimes it also accommodates part of antennomere 4.

Hindwing venation: terminology according to Kukalová-Peck and Lawrence (1993) and Dolin 1976 (Figure 3). The study of wing venation of click beetles is of great importance in Phylogeny and will be treated in future research.

Elytral-humeral area: anterior elytral area as long as scutellum length. This feature might be of importance at generic level.

Prosternal length: the length of the prosternum along the midline from its anterior edge to the line tangent to the anterior edge of the procoxal cavities. r3 and r4: in the wing referring to transverse veins (Figure 2). rp1, rp2, rp3: in the Hindwing referring to sclerotized areas involved in the folder mechanism, (Figure 2).

Pronotosternal suture appearing double, prosternal suture, prosternal double sutures (Golbach 1994): The prosternal suture is commonly found as a single or double feature in Elateridae, sometimes grooved in part of its anterior length. Hayek (1990) mentioned that the terminology "single" and "double" are misleading giving the idea that there are two sutures instead of only one. The suture or line of junction between the prosternum and the hypomeron is invariably manifested as a single line. However, when the suture is double, it is in reality accompanied through at least the anterior half of its length, or all of its length, by a narrowed, polished band of thicker cuticle, being called "double sutures". This band is the modified inner margin of the hypomeron, and it may be punctate or not, with setae or not; it may be slightly raised, and

in some species slightly convex in part of its length. This feature might be of importance at higher level.

TAXONOMY

Lynnyella new genus

Type species. *Deromecus suturalis* Candèze 1865:37, present designation.

Male Diagnostic Characters. Frontoclypeal carina complete across front of frons. Clypeus present and vertical. Antennomere 2 conical. Antennal pocket present. Prothorax longer than wide. Pronotal sides completely carinate, posterior angles divergent, unicarinate. Scutellum without a notch anteriorly. Mesocoxal cavity open to mesepimeron and mesepisternum. Mesosternal cavity with sides elevated. Elytra striate. Elytral apex denticulate, truncate or excavate.

Male. Body elongate or semi-stout; length 9.8-14.0 mm; yellowish brown to dark brown, with a longitudinal brown stripe darker than body color.

Head hypognathous, punctate; frontoclypeal carina complete across front of frons, rounded, protruded, polished; eyes small, [EI: 0.3]; clypeus present, crossed by a bridge medially in some species; labrum vertical or oblique, fully exposed. Labral suture curved; mandibles bidentate; maxillary and labial palp apical segment hatchet-shaped; antennae 11-segmented: antennomere 1 conical, antennomere 2 conical, antennomeres 3-4 conical or serrate, antennomeres 5 through 10 serrate, antennomere 11 serrate or tubular.

Prothorax longer than wide; parallel-sided or sinuate; convex or not anteriorly, with or without a depression over posterior half of pronotum; a dark brown strip longitudinally narrowed posteriorly; [PNI: 1.2-1.4]; pronotal base curved or straight; prescutal notch V- or U-shaped (Gur'jeva 1974); posterior angles divergent and carinate; pronotosternal suture appearing double (hereafter pronotosternal suture); prosternal spine long and ledged; pronotal hypomeron apically marginated; antennal pocket present.

Scutellum triangular or U-shaped; mesocoxae rounded, separated by posterior margin of

mesosternal cavity; mesosternal cavity elongate, floor deep, sides elevated, except between mesocoxae; posterior margin of mesosternal cavity extending posteriorly; mesocoxal cavity open to mesepimeron and mesepisternum; mesosternum and metasternum separated by a distinct external suture. Elytra parallel-sided through first third; [ELI: 2.8-3.2]; anterior elytral humeral area strongly declivous towards prescutum; striate, striae 1-3 with punctures tear-shaped, remaining striae with pits; elytron apex denticulate, truncate or excavate.

Hindwing well developed; 2.9 X as long as wide; wing membrane not notched in anal area; radial cell 4.7 X as long as wide; horizontal radial cross vein (R) present, radial cell present; rp1 and rp3 present, not conjoined, wedge cell present; apex of wing membrane without venation occupying 0.2 X length of wing membrane (Figure 2).

Metacoxal plate: widest region closest to medial body line.

Leg pro-, meso-, and metatibiae with small spurs apically, tarsi simple, vestiture long, dense, gold or yellowish.

Abdomen finely punctate, last abdominal sternite rounded.

Etymology. This name honors Lynn S. Kimsey, who provided the resources to conduct my elaterid research. Gender feminine.

Female. Similar to male, but body stouter, bigger and antennae not reaching apex of posterior angles; pronotum strongly convex entirely or anteriorly. The key of females will be given in a new publication when more females may be available.

Biology. Adults have been collected mostly from November to March; no other aspects of the biology are known.

Distribution. IV and X Region in Chile (Figure 32).

Included species. Species are described below.

Lynnyella suturalis (Candèze) new combination
 Figures 1, 2, 4, 18, 25, 32.

Male. Body elongate; brownish yellow; integument semi-shiny; vestiture dense, semi-erect, gold; [PEI: 3.2], length 14 mm, width 3.4 mm.

Head punctures areolate; frontoclypeal region

strongly sloping to base of clypeus; clypeus strongly narrow at middle, rugulose; labrum rectangular, slightly convex, punctate, 1.8 X as long as wide; antennomere 4 conical, antennomeres 5 through 11 serrate, antennomeres 10 and 11 exceeding posterior angles, [AP: 6-9-10-13-13-9-9-9-9-13], (Figure 4).

Prothorax parallel-sided; [PNI: 1.2]; pronotum slightly convex anteriorly, basally flat; areolate;



FIGURE 1. Dorsal habitus of the type *Lynnyella suturalis*.

FIGURA 1. Vista dorsal del tipo de *Lynnyella suturalis*

pronotal base curved; posterior angles strongly divergent; prescutal notch not visible; prosternum convex, yellow brownish, shiny, pinpoint punctures; pronotosternal suture divergent; pronotal hypomeron semi-polished, punctate, punctures confluent, not extending anteriorly beyond prosternum, pronotal hypomeron apical margin elevated, basally excavate, (Figure 11); length of prosternal spine after procoxae 1.9 X procoxal diameter; prosternal area between procoxae flat, separated by 1.0 X procoxal diameter.

Scutellum U-shaped, anterior margin broad, carinate, curved anteriorly, 1.5 X as long as wide;

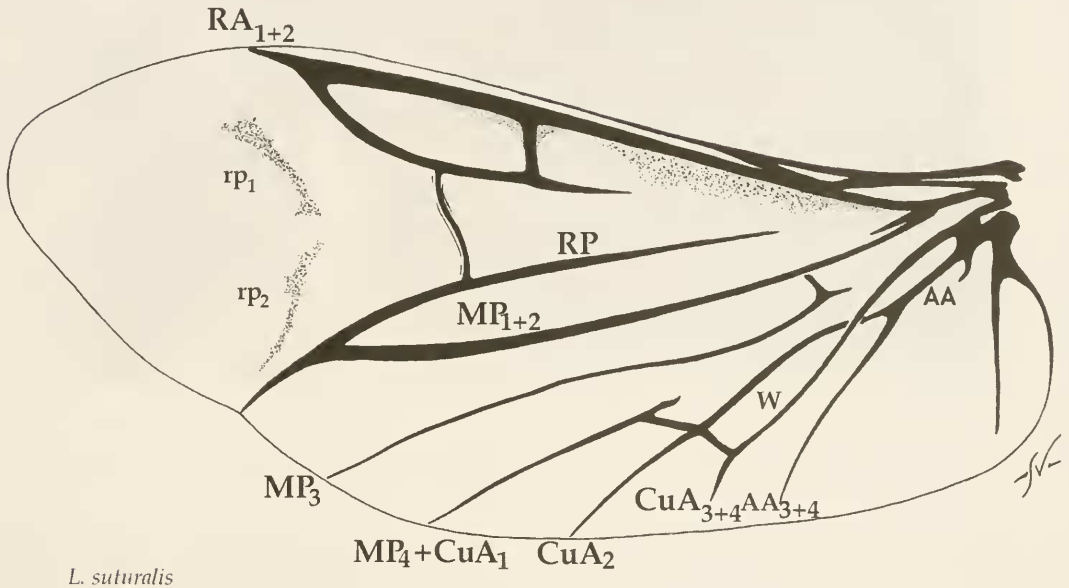
mesocoxae separated by 0.5 X mesocoxal diameter; posterior margin of mesosternal cavity notched posteriorly, and 0.5 X mesocoxal diameter long.

Elytra parallel-sided through second third; [ELI: 3.1]; elytral anterior border slightly angulate, carinate, with setae thin, erect; elytral-humeral area

glossy, without punctures, setae erect, scarce; apex denticulate.

Leg same as body coloration; [TP: 30-14-7-19-30], (Figure 18).

Male Genitalia. Aedeagus median lobe



L. suturalis

FIGURE 2. Hindwing venation of *Lynnyella suturalis*.

FIGURA 2. Venación alar anterior de *Lynnyella suturalis*.

parallel-sided, 3.0 X as long as wide, apex rounded, paramere apex triangular not reaching median lobe (Figure 25).

Type material. Holotype. Male. Chile. *Deromecus suturalis* Candèze 1865:37, orig. desig., 14 mm in length, examined, [BMNH].

Additional Material Examined. CHILE. Two males, Puelón, 19.I.1986, L. E. Peña, [ETA]; one male Puelón, 19.I.1986, L. E. Peña, [SRP]; one male, CILE, Selva Oscura, Curacautín, 27.I.1986, L. E. Peña, [ETA]; one male, Puerto Montt, Chamiza, 2.II.1971, M. Pino, [UCCC].

Distribution. IX and X Region in Chile (Figure 32).

Remarks. *Lynnyella suturalis* can be distinguished from other *Lynnyella* by the combination of its elongate brownish body, parallel-sided pronotum and denticulate elytral apex.

Lynnyella concepcionensis new species
Figures 3, 5, 12, 19, 26, 32

Male. Body semi-stout; dark brown; integument semi-dull; vestiture semi-erect, gold; [PEI: 3.0], length 13.0 mm, width 3.4 mm.

Head punctures areolate, frontoclypeal region strongly sloping to base of clypeus; clypeus elongate, slightly narrowed medially, crossed by a bridge

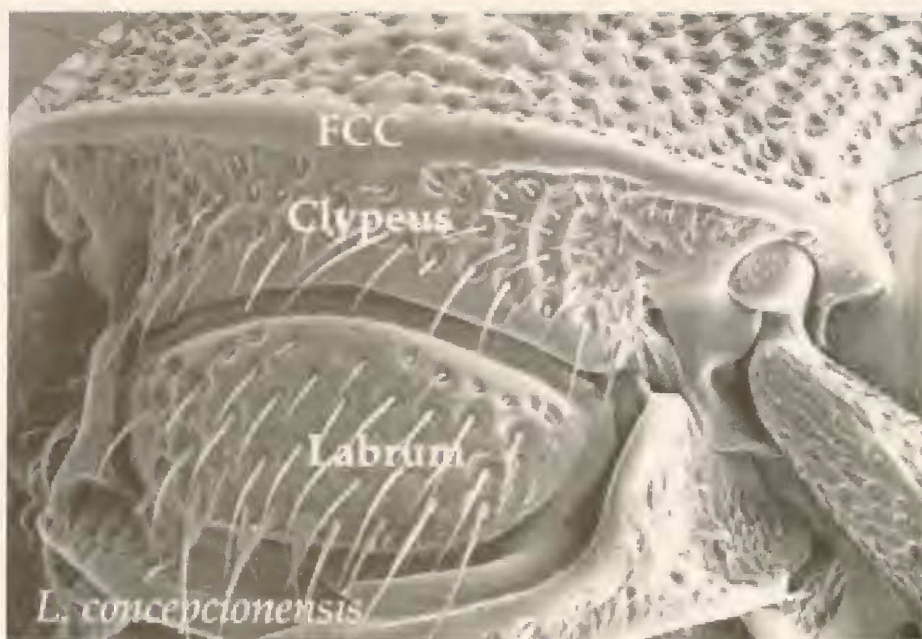


FIGURE 3. Scanning electron micrograph of *Lymnyella concepcionensis*, frontal view.

FIGURA 3. Fotografía al microscopio electrónico de barrido de *Lymnyella concepcionensis*, vista frontal.

medially; labrum rectangular, flat, punctate, 1.8 X as long as wide; antennomeres 4 through 11 serrate; antennomere 11 reaching posterior angles, [AP: 9-9-11-9-10-10-10-10-11-11], (Figure 5).

Prothorax parallel-sided; [PNI: 1.3], pronotum convex anteriorly, depressed posteriorly; areolate; posterior angles strongly divergent; basally curved; prescutal notch U-shaped; prosternum convex, glossy, yellowish, punctures pinpoint, sparse, setae long, semi-decumbent, yellowish; prosternal lobe not bent, rounded anteriorly, sides straight; pronotosternal suture straight; pronotal hypomeron polished, punctate, punctures dense, setae decumbent; hypomeral apical margin slightly elevated, extending anteriorly beyond prosternum, base excavate (Figure 12); length of prosternal spine after procoxae 1.9 X procoxal diameter; prosternal area between procoxae not flat, separated by 1.3 X procoxal diameter.

Scutellum U-shaped; anteriorly slightly notched; 1.4 X as long as wide; elytral-humeral area puncture free, with thin vestiture; mesocoxae separated by 0.7 X mesocoxal diameter; posterior margin of mesosternal cavity rounded, and 1.3 X mesocoxal diameter long.

Elytra parallel-sided throughout second third, last third narrowed towards apex; [ELI: 2.9]; elytral anterior border curved, and with setae long, semi-decumbent, yellowish; elytral-humeral area with setae semi-erect; apex truncate.

Leg light brown, [TP: 27-19-16-12-26], (Figure 19).

Male Genitalia. Aedeagus median lobe flat, 2.7 X as long as wide, apex rounded, paramere apex almost reaching median lobe apex (Figure 26).

Type material. Holotype. Chile. Male. Villa Santa Julia, Km 25, Bulnes, 25.III.1971 collector unreadable, [MNNC].

Distribution. VIII Region in Chile (Figure 32).

Etymology. This species is dedicated to the city of Concepción, Chile.

Remarks. *Lymnyella concepcionensis* can be distinguished from other *Lymnyella* by the combination of its semi-stout body, posteriorly depressed pronotum, and truncate elytral apex.

Lymnyella diegoi new species
Figures 6, 13, 20, 27, 32

Male. Body strongly elongate; light yellowish brown; integument semi-dull; [PEI: 3.0], length 11.4 mm, width 2.8 mm.

Head punctures areolate, frontoclypeal region strongly sloping to base of clypeus; clypeus elongate, crossed by a bridge medially, slightly narrowed medially; labrum rectangular, slightly convex, punctate, 2.3 X as long as wide; antennomeres 4 through 10 serrate, antennomere 11 tubular; antennomeres 9 through 11 exceeding posterior angles, [AP: 6-9-10-10-10-10-11-11-13], (Figure 6).

Prothorax parallel-sided; [PNI: 1.3], pronotum convex anteriorly; areolate; a slightly broad depression covering last third of posterior pronotal surface; pronotal base curved; posterior angles strongly divergent; prescutal notch U-shaped; prosternum convex, yellowish, sparse pinpoint punctures yellowish setae long and semi-decumbent; prosternal lobe rounded anteriorly; pronotosternal suture straight; pronotal hypomerion polished, punctate, punctures dense, setae decumbent; pronotal hypomerion apical margin slightly elevated; not extending anteriorly beyond prosternum; basally bi-excavate (Figure 13); length of prosternal spine after procoxae 1.2 X procoxal diameter; prosternal area between procoxae not flat, separated by 0.9 X procoxal diameter.

Scutellum triangular; anteriorly notched; 1.7 X as long as wide; elytral humeral area puncture free, with thin vestiture; mesocoxae separated by 0.4 X mesocoxal diameter; posterior margin of mesosternal cavity rounded, and 0.4 X mesocoxal diameter long.

Elytra parallel-sided throughout second third, last third strongly narrowed towards apex; [ELI: 3.0]; elytral anterior border angulate, and with setae long, semi-decumbent, yellowish; elytral-humeral area with setae semi-decumbent; apex unidenticate.

Leg light brown; tarsomeres elongate, [TP: 31.9-17.0-18.1-11.7-21.3], (Figure 20).

Male Genitalia. Aedeagus median lobe parallel-sided, 3.1 X as long as wide, apex truncate, paramere apex almost reaching median lobe apex (Figure 27).

Type material. Holotype. Chile. Male. Male:

Valparaíso, Canelillos, 30.VIII.1970, Mario Pino, 12.1 mm in length. [MNHN].

Paratypes here designated. Chile. Two males, Leyda, XII.47, collector unknown, [MNHN]; Los Cipreses, 1.1969. M. Pino, [UCCC]; Curacaví, 9 km west, at night, 9.IX.1967. C. W. O'Brien, [UCCC].

Other Material Studied. Chile. One male: Santiago, Lo Barnechea, 700 mt. [m elevation?], 27.VII.67, J. Valencia, [CNCI]; two males, Santiago 11 Km. S Melipilla Stibick, [ISNL]; San Antonio, Leyda, 150 mt. 15.XII.47J. Larrain, [MNHN]; Valparaíso Cuesta Pucalan. 5.X.1967. L. E. Peña, [ETA].

Distribution. V and Metropolitan Regions in Chile (Figure 32).

Etymology. This species honors my nephew Diego Martin Urrutia Arias.

Remarks. *Lymnyella diegoi* can be distinguished from other *Lymnyella* by the combination of its strongly elongate body, light coloration, flat pronotum, and unidenticate elytral apex.

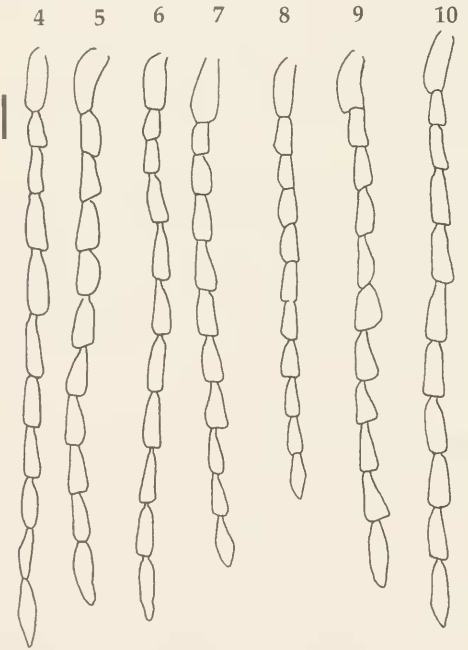


FIGURE 4-10. Antennae of *Lymnyella* species: Fig. 4 *suturalis*, Fig. 5 *concepcionensis*, n. sp., Fig. 6 *diegoi* n. sp., Fig. 7 *gerhardtae* n. sop., Fig. 8 *juanjosei* n. sp., Fig. 9 *longavinensis* n. sp., Fig. 10 *valenciai* n. sp. Scale bars: 0.5 mm.

FIGURA 4-10. Antenas de las especies de *Lymnyella*: Fig. 4 *suturalis*, Fig. 5 *concepcionensis*, n. sp., Fig. 6 *diegoi* n. sp., Fig. 7 *gerhardtae* n. sop., Fig. 8 *juanjosei* n. sp., Fig. 9 *longavinensis* n. sp., Fig. 10 *valenciai* n. sp. Escala: 0.5 mm.

Lynnyella gerhardtae new species

Figures 7, 14, 21, 28, 32

Male. Body semi-stout; integument semi-shiny; vestiture fine, dense, semi-erect, dull, pale yellowish; [PEI: 2.9], 3.6-3.9 X, length 12.1 mm, width 3.1 mm.

Head punctures areolate, frontoclypeal region sloping to base of clypeus, shiny; clypeus not crossed by a bridge medially; labrum slightly convex, sides and bottom basally rounded, rugulose, 2.1 X as long as wide; antennomere 4 conical, antennomeres 5 through 11 serrate; antennomere 11 not reaching apex of posterior angles, [AP: 7-8-10-9-10-10-10-10-15], (Figure 7).

Prothorax sides sinuate; [PNI: 1.4]; pronotum convex anteriorly; areolate; pronotal longitudinal broad depression over posterior half; pronotal base curved; posterior angles slightly divergent; prescutal notch V-shaped; prosternal lobe slightly bent, sides curved; prosternum strongly convex, reddish yellow, punctate, punctures dense, setae semi-decumbent; pronotosternal suture straight; pronotal hypomeron dark brown, punctate, punctures dense, setae semi-decumbent, marginated apically, not elevated apically; extending anteriorly beyond prosternum; base excavate (Figure 14); length of prosternal spine 2.5 X procoxal diameter; prosternal area between procoxae 1.3 X procoxal diameter.

Scutellum U-shaped; 2.1 X as long as wide; mesocoxae separated by 0.9 X mesocoxal diameter, posterior margin of mesosternal cavity truncate, and 0.4 X mesocoxal diameter long.

Elytra parallel-sided through second third; [ELI: 2.8]; elytral anterior border angulate, carinate, setae erect; elytral-humeral area without punctures or setae; apex strongly excavate.

Leg dark brown, [TP: 32.4-17.6-12.0-9.3-28.7], (Figure 21).

Male Genitalia. Aedeagus median lobe spoon shaped, non parallel-sided, 2.6 X as long as wide, apex rounded, parameres almost reaching apex of median lobe (Figure 28).

Type Material. Holotype. Chile. Male. III.1984. L. E. Peña, [MNNC]. Paratypes here designated. Chile. Two male, Las Trancas, Ñuble, I.1990, L. E. Peña, [ETA]; one female, Chillán, Las Trancas, III.1991, L. E. Peña, [ETA].

Distribution. VIII Region in Chile (Figure 32).

Etymology. This species is dedicated to Kath-Ann Gerhardt for her strong support and motivation through my Ph.D. studies research.

Remarks. *Lynnyella gerhardtae* can be distinguished from other *Lynnyella* by the combination of its semi-stout body, dark coloration, strongly convex pronotum, and strongly excavate elytral apex.

Lynnyella juanjoseorum new species

Figures 8, 15, 22, 29, 32

Male. Body elongate; dark brown; integument semi-dull; [PEI: 1.3], length 9.8 mm, width 2.1 mm.

Head punctures areolate; frontoclypeal region straight; clypeus elongate, slightly narrowed medially, bridged medially; labrum punctate, 2.3 X as long as wide; antennomeres 4 through 11 serrate, antennomere 11 reaching posterior angles, [AP: 7-9-7-10-10-10-11-10-10-16], (Figure 8).

Prothorax sides sinuate; [PNI: 1.3], pronotum convex anteriorly, depressed broadly posteriorly; areolate; pronotal base curved; posterior angles strongly divergent; prescutal notch U-shaped; prosternum slightly convex, brown, setae short semi-erect, gold; prosternal lobe rounded anteriorly, sides straight, reaching prosternal apex; pronotosternal suture straight; pronotal hypomeron punctate, punctures dense, setae decumbent; pronotal hypomeral apical margin not elevated; not extending anteriorly beyond prosternum, base excavate. (Figure 15); length of prosternal spine after procoxae 1.0 X procoxal diameter; prosternal area between procoxae flat, separated by 1.0 X procoxal diameter.

Scutellum U-shaped, 1.8 X as long as wide; mesocoxae separated by 0.8 X mesocoxal diameter; posterior margin of mesosternal cavity 0.8 X mesocoxal diameter long.

Elytra parallel-sided through second third, last third slightly narrowed towards apex; [ELI: 3.2]; elytral anterior border angulate, with setae long, semi-decumbent, yellowish; elytral-humeral area with setae semi-decumbent; apex excavate.

Leg dark brown; [TP: 24-24-7-11-34], (Figure 22).

Male Genitalia. Aedeagus median lobe

parallel-sided, 2.9 X as long as wide, apex excavate, paramere apex not reaching median lobe apex (Figure 29).

Type Material. Holotype. Chile. Male. Melipilla, Cajón Lisboa, Alhué. 22.XII. L. E. Peña, [ETA]. Paratype here designated: El Canelo. Santiago. R. Maipo. XII.76. L. E. Peña, [FMNH].

Other Material Studied. Chile. Male. El Canelo, Santiago. 12.XII.1976, C. Pérez de Arce, [ETA].

Distribution. Metropolitan Region in Chile (Figure 32).

Etymology. This species honors Aurora, Roberto and their son Juan José Pinto, my nephew.

Remarks. *Lynnyella juanjoseorum* can be distinguished from other *Lynnyella* by the combination of its stout body, dark brownish coloration, head not convex, and excavate elytral apex.

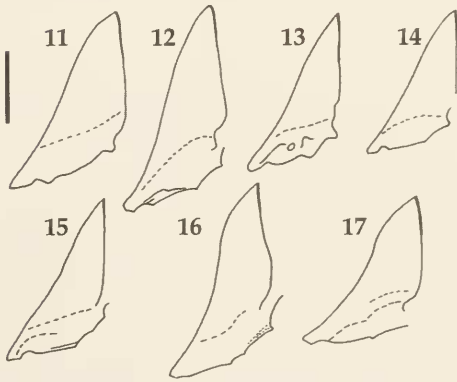


FIGURE 11-17. Hypomera of *Lynnyella* species: Fig. 11 *suturalis*, Fig. 12 *concepcionensis*, n. sp., Fig. 13 *diegoi* n. sp., Fig. 14 *gerhardtae* n. sp., Fig. 15 *juanjosei* n. sp., Fig. 16 *longavinensis* n. sp., Fig. 17 *valenciai* n. sp. Scale bar 1.0 mm.

FIGURA 11-17. Hipómeros de las especies de *Lynnyella*: Fig. 11 *suturalis*, Fig. 12 *concepcionensis*, n. sp., Fig. 13 *diegoi* n. sp., Fig. 14 *gerhardtae* n. sp., Fig. 15 *juanjosei* n. sp., Fig. 16 *longavinensis* n. sp., Fig. 17 *valenciai* n. sp. Escala: 1.0 mm

Lynnyella longaviensis new species

Figures 9, 16, 23, 30, 32

Male. Body strongly elongate; light yellowish brown; integument semi-dull; [PEI: 3.0], length 13.3 mm, width 3.1 mm.

Head punctures areolate; clypeus elongate, slightly narrowed medially; labrum punctate, 1.5 X as long as wide, not concave; antennomere 11 tubular, antennomere 11 exceeding posterior angles, [AP: 8-6-11-12-12-10-10-10-9-12], (Figure 9).

Prothorax parallel-sided; [PNI: 1.3], pronotum strongly convex anteriorly, depressed broadly posteriorly; areolate; pronotal base curved; posterior angles strongly divergent; prescutal notch V-shaped; prosternum slightly convex; prosternal lobe rounded anteriorly, sides straight; pronotosternal suture divergent; pronotal hypomeron punctate, punctures dense, setae decumbent; pronotal hypomeron apical margin elevated; not extending anteriorly beyond prosternum (Figure 16); length of prosternal spine 1.0 X procoxae diameter; prosternal area between procoxae separated by 1.0 X procoxal diameter.

Scutellum triangular; 1.8 X as long as wide; mesocoxae separated by 0.8 X mesocoxal diameter; posterior margin of mesosternal cavity 0.5 X mesocoxal diameter long.

Elytra parallel-sided through second third, last third slightly narrowed towards apex; [ELI: 2.8]; elytral anterior border angulate, and with setae long, erect, yellowish; elytral-humeral area with setae semi-decumbent.

Leg dark brown; [TP: 31-19-14-9-27], (Figure 23).

Male Genitalia. Aedeagus median lobe parallel-sided, 2.6 X as long as wide, apex concave, paramere apex almost reaching median lobe apex (Figure 30). Female unknown.

Type Material. Chile. Male. Longaví. 9.X.1987. E. T. Arias. In Asparagus. [ETA]. Paratype here designated. Chile. Male, Longaví, Light trap. 9.I.1990, E. Arias [ETA].

Distribution. VII Region in Chile (Figure 32).

Etymology. This species is named after Longaví where I collected it.

Remarks. *Lynnyella longaviensis* can be distinguished from other *Lynnyella* by the combination of its elongate body, light yellowish coloration and strongly excavate elytral apex.

Lynnyella valenciai new species

Figures 10, 17, 24, 31, 32

Male. Body strongly elongate; dark brown; integument semi-dull; [PEI: 3.3], length 13.6 mm, width 3.2 mm.

Head punctures areolate, frontoclypeal region straight; clypeus elongate, slightly narrowed medially; labrum punctate, 1.5 X as long as wide; antennomere 3 through 10 serrate antennomere 10 exceeding apex of posterior angles, antennomere 11 tubular shaped, [AP: 6-8-9-10-10-12-11-10-10-10-13], (Figure 10).

Prothorax parallel-sided; [PNI: 1.2], pronotum convex anteriorly, depressed broadly posteriorly; areolate; pronotal base curved; posterior angles strongly divergent; prescutal notch U-shaped; prosternum slightly convex; prosternal lobe slightly bent; pronotosternal suture divergent; pronotal hypomerion punctate, punctures dense, setae decumbent; pronotal hypomerion apical margin not elevated; extending beyond prosternum, base slightly excavate (Figure 17); length of prosternal spine 1.3 procoxae diameter; prosternal area between procoxae separated by 1.0 X procoxal diameter.

Scutellum triangular; 2.0 X as long as wide; mesocoxae separated by 0.8 X mesocoxal diameter; posterior margin of mesosternal cavity 0.5 X mesocoxal diameter long.

Elytra parallel-sided through second third, last third slightly narrowed towards apex; [ELI: 2.8], apex excavate.

Leg same as body color, [TP: 32-9-14-17-28], (Figure 24).

Male Genitalia. Aedeagus median lobe parallel-sided, 2.5 X as long as wide, apex truncate, paramere apex almost reaching median lobe apex (Figure 31). Female unknown.

Type Material. Holotype. Chile. Male: Choapa, Pichidanguí, 25 mt. 11.IX.93, L. Torelli, [JVC].

Distribution. IV Region in Chile (Figure 32).

Etymology. This species honors Jorge Valencia for his efforts and work in Chilean Elateridae.

Remarks. *Lynnyella valenciai* can be distinguished from other *Lynnyella* by the combination of its elongate body, dark brownish coloration, and excavate elytral apex.

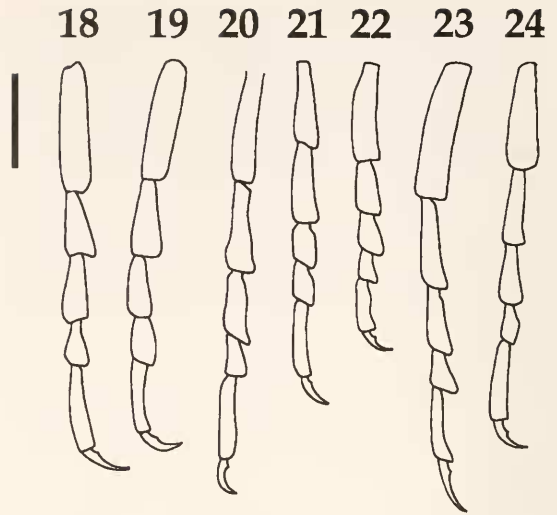


FIGURE 18-24. Tarsi of *Lynnyella* species: Fig. 18 *suturalis*, Fig. 19 *concepcionensis*, n. sp., Fig. 20 *diegoi* n. sp., Fig. 21 *gerhardtae* n. sp., Fig. 22 *juanjosei* n. sp., Fig. 23 *longaviniensis* n. sp., Fig. 24 *valenciai* n. sp. Scale bar 0.5 mm.

FIGURA 18-24. Tarsos de la especie de *Lynnyella*: Fig. 18 *suturalis*, Fig. 19 *concepcionensis*, n. sp., Fig. 20 *diegoi* n. sp., Fig. 21 *gerhardtae* n. sp., Fig. 22 *juanjosei* n. sp., Fig. 23 *longaviniensis* n. sp., Fig. 24 *valenciai* n. sp. Escala: 0.5 mm.

Key for the species of the genus *Lynnyella*.

- 1 Clypeus crossed by a bridge medially 2
Clypeus simple 5
- 2 Pronotum parallel-sided, posterior angles strongly divergent, body slender *diegoi*
Pronotal, sides sinuate, posterior angles stout, body stout..... 3
- 3 Antennomere 10-11 exceeding posterior angles4
Antennomere 11 reaching posterior angles.....
.....*juanjoseorum*
- 4 Elytral apex truncate, Tarsomere I as in Fig. 19 *concepcionensis*
Elytral apex excavate, tarsomere I as in Fig. 21...
.....*gerhardtae*
- 5 Pronotal hypomerion basally straight6
Pronotal hypomerion basally excavate.....
.....*suturalis* (Candèze) n. comb.
- 6 Scutellum triangular *longaviniensis*
Scutellum U-shaped*valenciai*

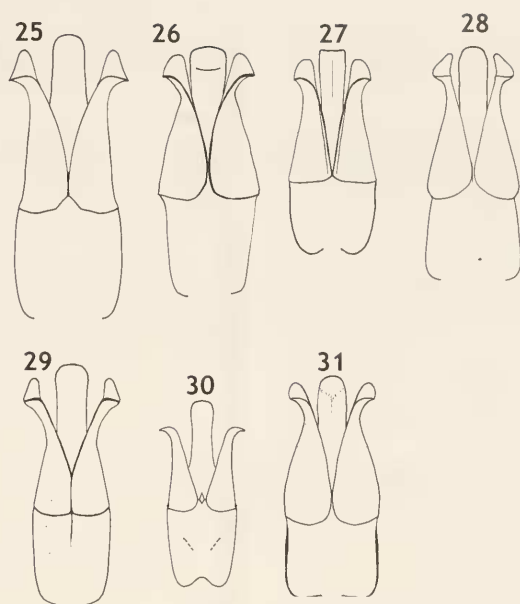


FIGURE 25-31. Male Genitalia of *Lynnyella* species: Fig. 25 *suturalis*, Fig. 26 *concepcionensis*, n. sp., Fig. 27 *diegoi* n. sp., Fig. 28 *gerhardtae* n. sp., Fig. 29 *juanjosei* n. sp., Fig. 30 *longavinensis* n. sp., Fig. 31 *valenciai* n. sp. Scale bar 0.5 mm.

FIGURA 25-31. Genitalia del macho de las especies de *Lynnyella*: Fig. 25 *suturalis*, Fig. 26 *concepcionensis*, n. sp., Fig. 27 *diegoi* n. sp., Fig. 28 *gerhardtae* n. sp., Fig. 29 *juanjosei* n. sp., Fig. 30 *longavinensis* n. sp., Fig. 31 *valenciai* n. sp. Escala: 0.5 mm.

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FIGURE 32. Map of distribution of *Lymnyella* species: *suturalis* (⊙); *concepcionensis* (f); *diegoi* (x); *gerhardtae*. (#); *juanjoseorum* (■); *longaviensis* (▲); *valenciai* (←).

FIGURA 32. Mapa de distribución de las especies de *Lymnyella* ⊙); *concepcionensis* (f); *diegoi* (x); *gerhardtae*. (#); *juanjoseorum* (■); *longaviensis* (▲); *valenciai* (←).

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